AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A computer-implemented method for generating and using a mapping scheme, the method comprising:

receiving commands from a user, wherein said commands establish a mapping between one or more attributes of a source and one or more attributes of a target;

~~wherein a plurality of attributes of said source are related to each other according to a first hierarchy that includes multiple hierarchical levels;~~

~~wherein a plurality of attributes of said target are related to each other according to a second hierarchy that includes multiple hierarchical levels;~~

~~wherein said commands establish, in said mapping, that a particular hierarchical level of said source is mapped to a particular hierarchical level of said target, wherein said particular hierarchical level of said source is at a different depth, within said first hierarchy, than the depth of said particular hierarchal level of said target within said second hierarchy; and~~

based on said commands, automatically generating a mapping scheme that represents said mapping, wherein said mapping includes at least one of:

multiple attributes of said source mapped to a single attribute of said target; and

multiple attributes of said target mapped to a single attribute of said source; and

using said mapping scheme to perform a single transformation that moves a set of data directly from said source into said target without materializing the entire set of data separate from said source and said target during said transformation;

wherein said source is one of a relational database and an XML document and said target is the other of said relational database and said XML document.

2-3. (Canceled)

4. (Original) The method of claim 1, wherein said mapping scheme further includes instructions on how to collapse a number of attributes of said source into a smaller number of attributes of said target.

5. (Original) The method of claim 1, wherein said mapping scheme further includes instructions on how to expand a number of attributes of said source to a greater number of attributes of said target.

6. (Original) The method of claim 1, wherein:
the step of receiving commands from a user includes receiving user input that
specifies a condition, and an action associated with the condition; and
the method further comprises the steps of
performing an operation that includes converting data, based on said mapping scheme, from the source to a format associated with the target;
during performance of said operation, performing the steps of
determining whether the condition is satisfied; and
if the condition is satisfied, then performing said action.

7. (Original) The method of claim 1, wherein:
the step of receiving commands from a user includes receiving user input that
specifies a specific set of instructions; and
the method further comprises the steps of
performing an operation that includes converting data, based on said mapping scheme, from the source to a format associated with the target; and
during performance of said operation, executing the specific set of instructions to affect said operation.

8. (Original) The method of claim 1, wherein:
the step of receiving commands from a user includes receiving user input that
declares a variable to which values can be assigned; and

the method further comprises the steps of

performing an operation that includes converting data, based on said mapping scheme, from the source to a format associated with the target; and

during performance of said operation, using said variable.

9. (Original) The method of claim 1, wherein:

the step of receiving commands from a user includes receiving user input that specifies a precompiled routine; and

the method further comprises the steps of

performing an operation that includes converting data, based on said mapping scheme, from the source to a format associated with the target; and

during performance of said operation, calling said precompiled routine to affect said operation.

10. (Previously Presented) The method of claim 1, further comprising:

reading source data definition that includes information about said plurality of attributes of said source;

reading target data definition that includes information about said plurality of attributes of said target; and

based on said source data definition and said target data definition, presenting to said user an interface that identifies said plurality of attributes of said source and said plurality of attributes of said target;

wherein said step of receiving commands from said user is performed by receiving said commands through said interface.

11. (Previously Presented) The method of claim 1, wherein said mapping scheme includes instructions on how to collapse a number of hierarchical levels of said source into a smaller number of hierarchical levels of said target.

12. (Previously Presented) The method of claim 1, wherein said mapping scheme includes instructions on how to expand a number of hierarchical levels of said source to a greater number of hierarchical levels of said target.

13-16. (Canceled)

17. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 1.

18-19. (Canceled)

20. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 4.

21. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 5.

22. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 6.

23. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 7.

24. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 8.

25. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 9.

26. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 10.

27. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 11.

28. (Original) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 12.

29-32. (Canceled)

33. (New) The method of claim 1, wherein:
a plurality of attributes of said source are related to each other according to a first hierarchy that includes multiple hierarchical levels;
a plurality of attributes of said target are related to each other according to a second hierarchy that includes multiple hierarchical levels; and
said commands establish, in said mapping, that a particular hierarchical level of said source is mapped to a particular hierarchical level of said target, wherein said

particular hierarchical level of said source is at a different depth, within said first hierarchy, than the depth of said particular hierarchal level of said target within said second hierarchy.

34. (New) The method of claim 1, wherein said single transformation is performed by executing commands defined in a programming language that supports operations to fetch said set of data directly from said source and store said set of data directly into said target.

35. (New) The method of claim 1, wherein:
said mapping scheme includes instructions which define that operations included in said single transformation are grouped to represent a transaction; and
using said mapping scheme to perform said single transformation further comprises performing said operations in said transaction.

36. (New) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 33.

37. (New) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 34.

38. (New) A computer-readable medium carrying one or more sequences of instructions which, when executed by one or more processors, causes the one or more processors to perform the method recited in Claim 35.